Electronic Version

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10/604,498

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Claims

[c1] 1.An imaging X-ray tube rotor assembly for an imaging tube comprising, at least partially, a magnetic non-corrosive material.

[c2] 2.An imaging X-ray tube rotor assembly as in claim 1 comprising:
a rotor core produced at least partially from a magnetic non-corrosive material.

[c3] 3.An imaging X-ray tube rotor assembly as in claim 2 wherein said rotor core approximately comprises at least 12% chromium.

[c4] 4.An imaging X-ray tube rotor assembly as in claim 2 wherein said rotor core at least partially comprises stainless steel.

[c5] 5.An imaging X-ray tube rotor assembly as in claim 2 further comprising an oxidized exterior surface.

[c6] 6.An imaging X-ray tube rotor assembly as in claim 2 further comprising:
a slot integrally formed with said rotor core; and
a bar produced at least partially from a non-magnetic

378/125-133, particularly: 127-129, 131

310/335-220+

336 (417/410.1 pumps)

310/211,212, 216,261, 221 Dig 2 265 ?

highly conductive material coupled to said slot.

[c7] 7.An imaging X-ray tube rotor assembly as in claim 6 wherein said non-magnetic highly conductive material comprises at least one of the following: copper, aluminum, silver, nickel, cobalt, and an alloy formed of two or more of the stated materials.

[c8] 8.An imaging X-ray tube rotor assembly as in claim 2 further comprising:
a plurality of slots integrally formed with said rotor core; and
a plurality of bars produced at least partially from a non-magnetic highly conductive material and coupled to said plurality of slots.

[c9] 9.An imaging X-ray tube rotor assembly as in claim 8 wherein said non-magnetic highly conductive material comprises at least one of the following: copper, aluminum, silver, nickel, cobalt, and an alloy formed of two or more of the stated materials.

[c10] 10.An imaging X-ray tube rotor assembly as in claim 2 further comprising:
a sheet coupled to said rotor core and produced at least partially from a non-magnetic highly conductive material; and

a sleeve coupled to said sheet and produced at least partially from a non-magnetic non-corrosive material.

[c11] 11.An imaging X-ray tube rotor assembly as in claim 10 wherein an exterior oxidized surface of said sleeve is oxidized.

[c12] 12.An imaging X-ray tube rotor assembly as in claim 10 wherein an exterior oxidized surface of said sleeve is non-oxidized.

[c13] 13.An imaging X-ray tube rotor assembly as in claim 10 wherein said non-magnetic highly conductive material comprises at least one of the following: copper, aluminum, silver, nickel, cobalt, and an alloy formed of two or more of the stated materials.

[c14] 14.An imaging X-ray tube rotor assembly as in claim 10 wherein said non-magnetic non-corrosive iron based material comprises approximately at least 12% chromium.

[c15] 15.An imaging X-ray tube rotor assembly as in claim 10 wherein said non-magnetic non-corrosive iron based material comprises stainless steel.

[c16] 16.An imaging X-ray tube rotor assembly comprising: a rotor core produced at least partially from stainless

steel and comprising;

a plurality of slots integrally formed with said rotor core; and

a plurality of bars produced at least partially from a non-magnetic highly conductive material and coupled to said plurality of slots.

[c17] 17.An imaging X-ray tube comprising an imaging tube rotor assembly having a rotor core produced at least partially from a magnetic non-corrosive material.

[c18] 18.A method of producing an imaging X-ray tube rotor assembly comprising forming a rotor core at least partially from a magnetic non-corrosive iron based material.

[c19] 19.A method as in claim 18 wherein forming a rotor core comprises forming said rotor core at least partially from chromium.

[c20] 20.A method as in claim 18 further comprising forming a sheet over said rotor core and at least partially from a non-magnetic highly conductive material.

[c21] 21.A method as in claim 20 further comprising forming a sleeve produced at least partially from a non-magnetic non-corrosive material over said sheet.

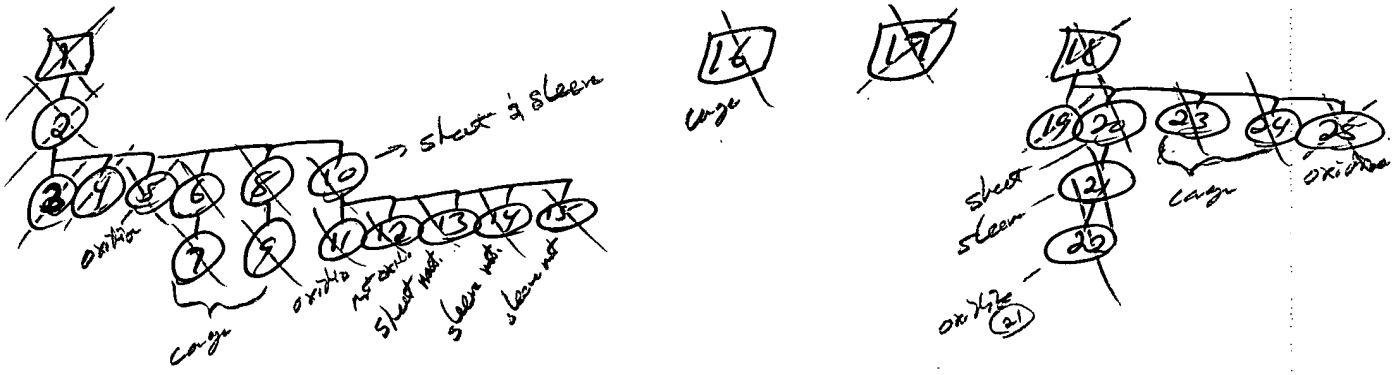
[c22] 22.A method as in claim 21 further comprising oxidizing

an exterior surface of said sleeve.

[c23] 23.A method as in claim 18 further comprising:
integrally forming a slot in said rotor core; and
forming a bar within said slot and at least partially from a non-magnetic highly conductive material.

[c24] 24.A method as in claim 18 further comprising:
integrally forming a plurality of slots in said rotor core; and
forming bars within said plurality of slots and at least partially from a non-magnetic highly conductive material.

[c25] 25.A method as in claim 18 further comprising oxidizing an exterior surface of the imaging tube rotor assembly.



16 = 1+2+4+8
17 = 1+2
18 = 1+2+16 (Fe-based)
19 ≈ 3
20 + 21 ≈ 10
22 = 11
23 = 6
24 = 8
25 = 6